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EXAMINER

HELM, CARALYNNE E

ART UNIT

PAPER NUMBER

1615

MAIL DATE

DELIVERY MODE

08/27/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/807,362	Applicant(s) GLAUSER ET AL.	
	Examiner CARALYNNE HELM	Art Unit 1615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 August 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-55, 62, 66-99, 103, 105 and 107-115 is/are pending in the application.
- 4a) Of the above claim(s) 1-42 and 66-99 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 43-55, 103, 105, and 107-115 is/are rejected.
- 7) ☒ Claim(s) 47, 110, 114 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Note to Applicant: References to paragraphs in non-patent literature refer to full paragraphs (e.g. 'page 1 column 1 paragraph 1' refers to the first full paragraph on page 1 in column 1 of the reference)

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 10, 2010 has been entered.

Election/Restrictions

To summarize the current election, applicants elected group III, without traverse.

Claims 1-42 and 66-99 were withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected inventions.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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Claims 49 and 111 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 49 and 111, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim Objections

Claims 47, 110, and 114 are objected to because of the following informalities: claims 47 and 110 contain the misspelling "3-hydroxyvalerate" while claim 114 recites "and combinations thereof" twice. Appropriate correction is required.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 43 is provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 12, and 20 of copending Application No. 11/171111. The claims of the copending application and that of the instant application both teach a medical device with a coating where the coating is composed of polymers that contain in their chain a backbone, along with combinations of moieties that include phosphoryl choline and hyaluronic acid. They also teach the presence of a bioactive in the coating. Therefore claim 43 is obvious over claims 1, 12, and 20 of copending Application No. 11/171111.

This is a provisional obviousness-type double patenting rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.

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3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

The four factual inquiries of *Graham v. John Deere Co.* have been fully considered and analyzed in the rejections that follow.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 43-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toner et al. (previously cited) in view of Durrani et al. (previously cited).

Toner et al. teach implantable medical devices that include a polymeric layer loaded with a beneficial agent (see claim 1). This polymeric layer is taught to have phosphoryl choline as a pendant group (see claim 22; instant claims 43, 103, and 105). Toner et al. teach polyester, poly(vinyl pyrrolidone), poly(ϵ -caprolactone), polylactic acid (interpreted as equivalent to polylactide), polyglycolic acid (interpreted as equivalent to polyglycolide), silicones, poly(vinyl alcohol) and copolymers thereof as envisioned polymers in this layer (see paragraph 71). Thus copolymers of poly(vinyl alcohol), a

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claimed non-fouling moiety, with polyester, poly(vinyl pyrrolidone), silicones, poly(ϵ -caprolactone), polylactic acid or polyglycolic acid are envisioned and meet the limitations of instant claims 46-49 (see instant claims 43 and 46-49). Rapamycin, also known as sirolimus, is taught as an envisioned anticancer beneficial agent for the coating and stents are envisioned devices (see paragraph 59 and claim 24; instant claims 44-45). Toner et al. do not explicitly teach how the phosphoryl choline is attached to the polymer.

Durrani et al. teach the attachment of phosphoryl choline moieties to polymer surfaces to improve their thromboresistance (see page 121 column 1-column 2 paragraph 1). Specifically, Durrani et al. teach reactive phosphoryl choline compounds that react with hydroxyl groups on polymer surfaces to achieve this modification(see page 124 column 1 paragraph 2; instant claim 106).

It would have been obvious to one of ordinary skill in the art to prepare the device of Toner et al. with the rapamycin containing coating composed of copolymers of poly(vinyl alcohol) with polyester, poly(vinyl pyrrolidone), silicones, poly(ϵ -caprolactone), polylactic acid or polyglycolic acid having pendant phosphoryl choline moieties attached via hydroxyl groups of the poly(vinyl alcohol). Since Durrani et al. teach the benefit of phosphoryl choline on polymer surfaces attached via hydroxyl groups and hydroxyl groups would have been available on the polymer chain, this ordinarily skilled artisan would have been motivated to make this modification to Toner et al. and had a reasonable expectation of success. Therefore claims 43-49 are obvious over Toner et al. in view of Durrani et al.

Claims 43-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toner et al. in view of Durrani et al. as applied to claims 43-49 above, and further in view of Marchant (previously cited) and Koulik et al. (previously cited).

Toner et al. in view of Durrani et al. make obvious an implantable device with a sirolimus containing coating composed copolymers of poly(vinyl alcohol) with polyester, poly(vinyl pyrrolidone), silicones, poly(ϵ -caprolactone), polylactic acid or polyglycolic acid having pendant phosphoryl choline moieties attached via hydroxyl groups of the poly(vinyl alcohol). This modified reference does not explicitly teach heparin bound to the polymer.

Koulik et al. teach a medical device with a biocompatible coating where a phosphoryl choline macromer, polybutylmethacrylate (acrylic polymer) and heparin are included in the same polymer (see abstract; instant claim 46). The presence of the heparin, in addition to the phosphoryl choline is taught to reduce thrombogenicity (see paragraph 25).

Marchant teaches medical devices with polymer coatings that are resistant to protein deposition and coagulation (thrombogenesis) (see column 3 lines 2-5). Marchant teaches heparin as an anti-thrombogenic agent attached to the polymer to facilitate this resistance (see column 3 lines 14-15; instant claims 50-51 and 53-54). Marchant also teaches that the heparin is attached to the polymer via a spacer arm such that the surface can be non-thrombogenic without adversely affecting the bulk properties of the polymer coating (see column 3 lines 11-13 and 19-21). Additionally,

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the spacer is taught to be poly (ethylene oxide) (PEG) which provides a solvated surface for the device and lifts the heparin off the surface of the device (see column 3 line 65-column 4 line 7; instant claims 43 and 50-55).

Given the teachings of Koulik et al. that motivate having both phosphoryl choline and heparin on a medical device coating and those of Marchant that cite the benefits of binding heparin to a polymer coating via a PEG spacer, one of ordinary skill in the art at the time of the invention would have found it obvious to use this attachment scheme in the coating of Toner et al. in view of Durrani et al. Therefore claims 49-55 are obvious over Toner et al. in view of Durrani et al., Marchant, and Koulik et al.

Claims 43-55 and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toner et al. in view of Durrani et al., Marchant, and Koulik et al. as applied to claims 43-55 above, and further in view of Falatico et al., and Uhrich et al.

Toner et al. in view of Durrani et al. make obvious an implantable device with a sirolimus containing coating composed copolymers of poly(vinyl alcohol) with polyester, poly(vinyl pyrrolidone), silicones, poly(ϵ -caprolactone), polylactic acid or polyglycolic acid having pendant phosphoryl choline moieties attached via hydroxyl groups of the poly(vinyl alcohol) as well as heparin attached via PEG spacer chains (see instant claims 43-55). This modified reference does not explicitly teach a copolymer that degrades into components that are therapeutically active in sub-acute thrombosis.

Falatico et al. teach stents that are coated with a polymer coating that contains multiple drugs (see paragraphs 31 and 33). In particular, Falatico et al. teach the

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combination of anti-inflammatory agents with rapamycin (sirolimus) and heparin in such a surface coating (see paragraph 62; instant claim 45).

Uhrich et al. teach a polyanhydride ester polymer that degrades into the anti-inflammatory salicylic acid (therapeutically active in sub-acute thrombosis, interpreted as equivalent to PolyAspirin™) (see example 1; instant claim 62). These polymers are taught used in implanted medical devices (see paragraph 12). In addition, Uhrich et al. also teach that other biologically active molecules can be included with these polymers and in particular, are covalently bound to these polymers (see paragraph 15).

In light of the teachings of Uhrich et al. and Falatico et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to use their salicylic acid producing polyanhydride ester polymer as the polyester taught by Toner et al. in view of Durrani et al., Marchant, and Koulik et al. Therefore claims 43-55 and 62 are obvious over Toner et al. in view of Durrani et al., Marchant, Koulik et al., Uhrich et al. and Falatico et al.

Interpretation for instant claim 103 and its dependants: When applicants teach glycerine as a monomer, the terminal hydroxyl groups participate in the polymerization, leaving the central hydroxyl group free to react with a phospholipid moiety and yielding a polymer comprising glycerine and phospholipid moieties. In this polymer the terminal hydroxyl groups no longer exist but have been converted into other functional groups (e.g. ester) (see instant specification page 15 lines 1-4 and scheme 4). This interpretation of a biocompatible polymer is also used for the prior art where a polymer

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that utilizes glycerol as a monomer or reactant in the polymerization will be considered to meet the limitations of a biocompatible polymer comprising glycerine.

Claims 103, 105, 107, 109, and 112-115 are rejected under 35 U.S.C. 103(a) as being unpatentable over Luthra et al. (US PGPub No. 2003/0021762) in view of Durrani et al.

Luthra et al. teach a polysaccharide biomaterial that is envisioned as a coating on a blood contacting medical device (see abstract and paragraphs 11 and 23; instant claim 103). Heparin methacrylate (HMA) is an envisioned monomer utilized to produce the polysaccharide material along with other methacrylate monomers which include hydroxyethyl methacrylate (HEMA) and glycerol methacrylate (GMA) (see example paragraphs 83-84; instant claims 107 and 113-114). One example combines three monomers that include HMA and HEMA (see example 4). It would have been obvious to one of ordinary skill in the art to prepare a similar three monomer polymer that includes HMA, HEMA, and GMA as a substitution of one envisioned monomer for another in the taught polysaccharide (see instant claims 103, 107, 109 and 113-114). This polymer would then contain a backbone of acrylic polymers and contain glycerine as well as heparin (see instant claims 103 and 112). Luthra et al. also teach a modified HMA monomer where a chain of polyethyleneglycol is between the heparin and the methacrylate (see paragraph 141, instant claim 115). It also would have been obvious to use this modified HMA with HEMA, and GMA in the polysaccharide polymer as an envisioned substitute for the unmodified HMA that would have had a predictable

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outcome (e.g. improved hemocompatibility due to more accessible heparin). Luthra et al. do not explicitly teach the presence of phosphoryl choline in the polymer.

Durrani et al. teach the attachment of phosphoryl choline moieties to polymer surfaces to improve their thromboresistance (see page 121 column 1-column 2 paragraph 1). Specifically, Durrani et al. teach reactive phosphoryl choline compounds that react with hydroxyl groups on polymer surfaces to achieve this modification(see page 124 column 1 paragraph 2; instant claims 103 and 105).

Since Durrani et al. teach the benefit of phosphoryl choline on polymer coatings of medical devices attached via hydroxyl groups and hydroxyl groups would have been available on the polymer chain (on the GMA moieties or HEMA moieties), one of ordinary skill in the art at the time of the invention would have found it obvious to make this modification to the terpolymers Luthra et al. described above and had a reasonable expectation of success. Therefore claims 103, 105, 107, 109, and 112-115 are obvious over Luthra et al. in view of Durrani et al.

Claims 103, 105, 107-108, and 113-114 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al. (US Patent No. 7, 722,894) in view of Durrani et al. and Falatico et al. (previously cited).

Wang et al. teach glycerol-diacid copolymers (see column 1 lines 56-57 and figure 1C; instant claim 103). Figure 1C shows an embodiment of this polymer and demonstrates the presence of hydroxyl groups in the structure. They go on to teach the envisioned polymer as a stent coating (see column 21 lines 31-32). This coating is

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taught to include anti-inflammatory agents as well as heparin, where these actives can be bound or unbound (see column 21 lines 35-39 and 42-44; instant claim 107). This translates to an embodiment with an anti-inflammatory agent in the coating and heparin bound to the coating (see instant claims 107 and 113-114). Wang et al. do not explicitly teach phosphoryl choline moieties as a part of the polymer or particular anti-inflammatory agents.

Falatico et al. teach stents with drug containing polymer coatings (see abstract). They go on to teach dexamethasone as a particular anti-inflammatory agent known for inclusion in such configurations (see claim 24; instant claim 108).

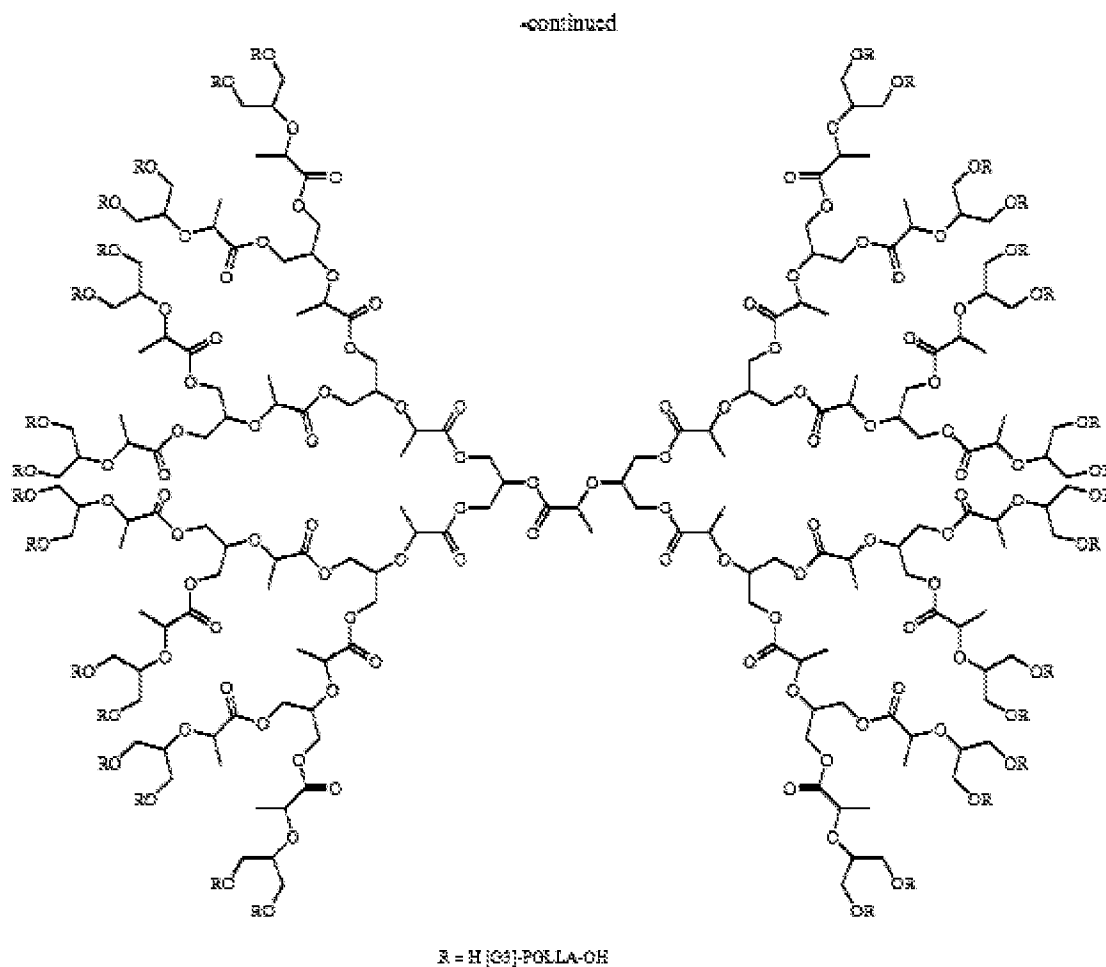
Durrani et al. teach the attachment of phosphoryl choline moieties to polymer surfaces to improve their thromboresistance (see page 121 column 1-column 2 paragraph 1). Specifically, Durrani et al. teach reactive phosphoryl choline compounds that react with hydroxyl groups on polymer surfaces to achieve this modification(see page 124 column 1 paragraph 2; instant claims 103 and 105).

Since Durrani et al. teach the benefit of phosphoryl choline on polymer coatings of medical devices attached via hydroxyl groups and hydroxyl groups would have been available on the polymer chain, one of ordinary skill in the art at the time of the invention would have found it obvious to make this modification to the polymer coating of Wang et al. in view of Falatico et al. and had a reasonable expectation of success. Therefore claims 103, 105, 107-108, and 113-114 are obvious over Wang et al. in view of Falatico et al. and Durrani et al.

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Claims 103, 105, and 111 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carnahan et al. (WO 02/067908) in view of Durrani et al. and Francois et al. (Biomaterials 1996 17:667-678).

Carnahan et al. teach a dendritic polymer produced by polymerizing lactic acid with glycerol, yielding a polyester containing glycerol (see page 3 paragraph 1; instant claim 111). Examples 1-10 step through the synthesis process for a three generation dendrimer and the result is pictured below:



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Carnahan et al. go on to teach the polymer as a coating on medical devices, where catheters are envisioned (see page 5 paragraph 3-page 6 line 5). Carnahan et al. do not explicitly teach the presence of phosphoryl choline on the polymer.

Francois et al. teach the desire for catheters to have resistance to thrombosis (see abstract and page 674 column 1 paragraph 1)

Durrani et al. teach the attachment of phosphoryl choline moieties to polymer surfaces to improve their thromboresistance (see page 121 column 1-column 2 paragraph 1). Specifically, Durrani et al. teach reactive phosphoryl choline compounds that react with hydroxyl groups on polymer surfaces to achieve this modification(see page 124 column 1 paragraph 2; instant claims 103 and 105).

Since Francois et al. and Durrani et al. teach the benefit of phosphoryl choline on polymer coatings of medical devices and their attachment via available hydroxyl groups, one of ordinary skill in the art at the time of the invention would have found it obvious to make this modification to the polymer coating of Carnahan et al. and had a reasonable expectation of success. Therefore claims 103, 105, and 111 are obvious over Carnahan et al. in view of Francois et al. and Durrani et al.

Claims 103, 105, 107 and 110-111 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pinchuk et al. (US Patent No. 5,575,818) in view of Lee et al. (Journal of Polymer Science A: Polymer Chemistry 2001 39:973-985) and Durrani et al.

Pinchuk et al. teach a stent that includes a polymer coating where polylactide is an envisioned polymer (see column 8 lines 47-49; instant claims 110-111). They go on

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to teach the presence of drugs in the coating where anticoagulants are contemplated (see column 8 lines 20-24; instant claim 107). In addition, Pinchuk et al. teach the inclusion of cellular substances to improve hemocompatibility of the coating. They do not explicitly teach the presence of phosphoryl choline on the polymer or glycerine in the polymer.

Lee et al. teach multi-armed polylactide polymer with hydroxyl terminal groups (see abstract). The polymer is made from the polymerization of glycerine and lactide (see scheme 1; instant claims 110-111). These polymers are envisioned for drug delivery systems (see page 973 column 1 paragraph 1).

Durrani et al. teach the attachment of phosphoryl choline moieties to polymer surfaces to improve their thromboresistance (see page 121 column 1-column 2 paragraph 1). Specifically, Durrani et al. teach reactive phosphoryl choline compounds that react with hydroxyl groups on polymer surfaces to achieve this modification(see page 124 column 1 paragraph 2; instant claims 103 and 105).

As a polylactide envisioned for inclusion in a drug delivery system, it would have been obvious to one of ordinary skill in the art at the time of the invention to select the polylactide of Lee et al. as the polylactide in the drug delivery coating of Pinchuk et al. In addition, given the suggestion by Pinchuk et al. to include cellular substances to improve the hemocompatibility and the teachings of polymer modification by phosphoryl choline, a cell membrane material, Durrani et al. it would also have been obvious to attach phosphoryl choline to the multi-armed polylactide via hydroxyl groups. Since the polylactide would have hydroxyl groups available on the polymer chain, one of ordinary

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skill in the art at the time of the invention would have had a reasonable expectation of success. Therefore claims 103, 105, 107 and 110-111 are obvious over Pinchuk et al. in view of Lee et al. and Durrani et al.

Response to Arguments

Applicants' arguments, filed August 10, 2010, have been fully considered but those regarding the rejections made under 35 USC 103(a) are moot in light of the new grounds of rejection. All previous rejections of record are hereby withdrawn in favor of the new grounds of rejection presented above. They constitute the complete set presently being applied to the instant application.

Conclusion

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CARALYNNE HELM whose telephone number is (571)270-3506. The examiner can normally be reached on Monday through Friday 9-5 (EDT).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert A. Wax can be reached on 571-272-0623. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Caralynne Helm/
Examiner, Art Unit 1615

/Juliet C Switzer/

Primary Examiner, Art Unit 1634